

December 19, 1975

SOIL TESTING SERVICES, INC.
111 PFINGSTEN ROAD NORTHBROOK, ILLINOIS 60062

PHONE Chicago 312-273-5440 Northbrook 312-272-6520

Arthur G. McKee & Company 10 South Riverside Plaza Chicago, Illinois 60606

Attention: Mr. Anthony DelGuidice

STS Job No. 17030-B

Reference: Subsurface Investigation for the Proposed Plant Expansion - Best

Foods, 2816 S. Kilbourn Avenue in Chicago, Illinois

Gentlemen:

We are submitting, herewith the results of the subsurface investigation performed at the above referenced plant site. If there are any questions with regard to the contents of this report, or if we can be of further service to you in any way, please do not hesitate to contact us.

Very truly yours,

SOIL TESTING SERVICES TYC.

Sylvio J. Pollici, P.E. Senior Project Engineer

Sy dan U. Oll

Chief Engineer

SJP/6b

EPA Region 5 Records Ctr.

SUBSURFACE INVESTIGATION

FOR

PROPOSED PLANT EXPANSION
BEST FOODS
2816 SOUTH KILBOURN AVENUE
CHICAGO, ILLINOIS

FOR

Arthur G. McKee & Company 10 South Riverside Plaza Chicago, Illinois

BY

SOIL TESTING SERVICES, INC. 111 Pfingsten Road Northbrook, Illinois 60062

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SOIL TESTING SERVICES INC.

Sylvio J. Pollici, P.E.

Senior Project Engineer

Safdar A. Gill, Ph.D., P.E.

Chief Engineer

SJP/sb

STS Job No. 17030-B December 19, 1975

INTRODUCTION

The contents of this report are based upon the results of fourteen (14) soil borings performed within an area immediately north of the existing Best Foods plant, 2816 South Kilbourn Avenue in Chicago, Illinois. The borings were located in accordance with dimensions shown in the site plan furnished to us and as noted. The approximate location diagram showing the location of the borings is appended. Surface elevation at the location of each boring is referenced to elevation +100 assigned to the first floor level of the Margarine building.

According to our understanding, the proposed structure will be a precast concrete construction, with masonry exterior walls and will be one story high (24 ft. clear height) except for the second level mezzanine areas, one along a portion of the south side and the other within the northwest corner. A slab-on-grade construction (no basement) is proposed at dock height. Thus, it is possible to predict that some fill will be required over the present grade. Floor pressures due to the live load are estimated to be on the order of 500 psf on average. The columns will be placed on 40 ft. x 50 ft. bays typically and will carry loads up to 220 kips except within the mezzanine areas where loads up to 400 kips are anticipated. Elevated storage tanks, applying loads on the order of 250 kips, are proposed in the general location of borings 13 and 7.

The purpose of this report is to describe the soil conditions encountered, to analyze and evaluate the results of the test data, and to make recommendations regarding foundation design and construction procedures.

SUBSURFACE INVESTIGATION PROCEDURES

The fourteen soil borings were performed by a rotary type drilling rig. Borehole advance and cleanup were carried out by various cutting bits and circulating
water. Casing was used, wherever necessary, to maintain the boreholes open.

Due to the prevailing cohesive nature of the materials encountered, most of
the soil sampling was performed by means of the shelby tube sampling procedure
and in accordance with ASTM Specification D 1587. A few split-spoon samples
were obtained and in accordance with ASTM Specification D 1586. Bedrock coring
was performed, as requested, at the location of borings 1, 7, and 13. The
coring was done in accordance with ASTM Specification D-2113. Copies of the
above referenced ASTM Specifications are appended.

TESTING PROGRAM

The natural moisture content was determined, generally, on the representative samples obtained. The undrained compressive strength of the essentially cohesive soils was, for the most part, estimated by means of the static penetrometer.

For a few of the samples, the undrained compressive strength was determined

directly by means of the unconfined compression test. These latter samples were also tested for unit dry weight. The results of the tests are shown on the attached boring logs and also in the three soil profiles included in the appendix. After completion of the testing program, each sample was examined by experienced soil engineers and classified on the basis of texture and plasticity in accordance with the Unified Soil Classification system. The group symbol according to this system of classification is shown in parentheses following the soil description on the boring logs. For the terminology used in the soil description, reference may be made to the General Notes, attached with this report.

The procedures for preparing final logs from the field logs and laboratory test results are described on the sheet entitled "Procedures Regarding Field Logs, Laboratory Data Sheets and Samples", included in the appendix of this report.

SITE & SUBSURFACE CONDITIONS

The site investigated is relatively flat, sloping gently from the west towards the east. Within the portion adjacent to the west side, fill, cinders primarily, are virtually exposed at the surface. Towards the east the borings were drilled through existing pavement.

For specific conditions at the location of each boring, the reader is referred to each of the boring logs appended. All the fourteen borings were included in three soil profiles that were drawn in the east-west direction. Each profile shows the conditions with respect to an approximate configuration of existing surface, variations in the level of the various significant strata, and for a few places, the perched water level encountered during borehole advance is also noted. Significant soil parameters are shown for ready reference. The profiles also show the recommended bearing level for foundations designed for 5,000 psf and 12,000 psf as well as the approximate weighted average elevation level of the recommended bearing levels along each profile. It should be noted that the strata lines representing boundaries between soil types and/or conditions are only approximate and that in situ, the actual transition may be gradual. Also, where discontinuity of a strata occurs, this discontinuity is represented schematically only (not to scale).

Since it was possible to establish a reasonable degree of soil continuity and conditions along each profile the reader is referred to the soil profiles for soil description and conditions. For specific description of the bedrock condition, please refer to the respective boring logs.

Remarks

1. Fill & Underlying Topsoil - As noted in the profiles, cinder fill (crushed

layer of sand fill along the further west line of borings. According to the borings, where fill is exposed at the surface the fill material was placed upon natural topsoil. In accordance with the borings, the original topsoil was apparently stripped under the areas paved and the space vacated by the topsoil was replaced with a clay fill. The worst topsoil condition at the location of the borings was disclosed at B-4 (1 ft. thick layer, water content near 42% and of relatively soft consistency).

2. Bedrock - The surface of the bedrock was disclosed at elevation 80 approximately along the west side and on the basis of the borings, it dips towards the east being close to elevation 71 at B-13. Essentially clayey materials seem to prevail directly on the surface of the bedrock within the western portion of the site whereas, and on the basis of the conditions near the end of boring 14 which are actually shown at the location of boring 13, it is possible to predict that silty materials overlay the bedrock along the eastern portion of the site. These silty deposits are probably water bearing. On the basis of the coring data the bedrock is adequately sound.

GROUND WATER TABLE CONDITIONS

Conditions at the site provide for the existence of a perched water condition within the lower level of the fill. The reason is because the fill is relatively

pervious and undoubtedly water of precipitation can infiltrate through this relatively pervious material. This ground water condition was verified during drilling at the location of borings B-1 through 6 and also at boring 10, and as already mentioned, originates from surface infiltration. The water so stored is unable to seep towards the continuous ground water due to the presence of relatively impervious barrier which at the site investigated, most likely and primarily, the yellow brown and light gray clayer layer which is moderately plastic and quite impervious. The continuous ground water is located at a level probably lower than elevation 90 generally. This water level, which varies only slightly throughout the year, is likely to be of minor significance during construction of foundations placed on soils. Infiltration from the perched water is also likely to be of minor effect and when it occurs, is likely that it can be handled by normal construction procedures. The perched water level is anticipated to vary throughout the year, the variation dependent upon precipitation, infiltration and evaporation.

ANALYSIS & RECOMMENDATIONS

Foundations

In the profiles included in the appendix, two recommended bearing levels in soils are traced. The first level is located at elevations varying between 91.5 and 94 and the bearing material at the aforementioned levels consist

primarily of a brown and gray silty clay with water content varying from 16 to 20% and of a very tough to hard consistency. For foundations so placed, we recommend designing for a net allowable soil bearing pressure not to exceed 5,000 psf. The second level is located between elevations 85 and 87 and these numbers refer to a weighted average elevation level because in actuality, at the location of the borings, the levels were found to vary from as deep as elevation 83 (borings 8 and 10) to as shallow as elevation 89.5 (borings 1 and 9). The bearing material consists primarily of a gray silty clay with varying amounts of sand, of a hard to very hard consistency, and with water content normally less than 16%. For foundations so placed we recommend designing for a net bearing pressure not to exceed 12,000 psf.

It is apparent that if the final subgrade level for the slab is going to be at a level close to elevation 100, that support of the foundations designed for 12,000 psf is likely to be a more economical solution than foundations designed for 5,000 psf. For a slab-on-grade close to elevation 100, both solutions involve foundations placed at a level somewhat too deep for a footing foundation construction. Drilled pier foundations would be most feasible.

Regarding support at other levels, the relatively shallow yellow brown and slight gray silty clay, which underlies topsoil within the western portion of the site, and clay fill, or in some places is the pavement base, is suitable for supporting foundations designed for a pressure that we recommend not to

has a relatively high water content and is susceptible to compress more under the recommended maximum bearing pressure of 3,000 psf than the two clayey deposits previously recommended for bearing support. Regarding supporting of the structure upon the surface of the bedrock, this is also feasible. However, the possibility of construction difficulties may be anticipated within the eastern portion of the site because of the presence of silty materials on the surface of the bedrock. These silty deposits are water bearing and as such may be difficult to handle during construction. Straight shafts extend to the surface of the bedrock can be designed on the basis of an allowable bearing pressure of 100 tsf. However, we recommend that test caissons be performed within the eastern portion of the site in order to verify whether difficulties will be experienced during construction.

Slab on Grade

within the areas presently paved, and on the basis of the borings, it appears that the topsoil was stripped and the fill material underlying the pavement base is of sufficient strength to support new fill and future slab pressures. The main question remains in those areas where the fill is exposed at the surface because topsoil was encountered below these areas, and some of the topsoil has a relatively high water content and is of soft consistency (boring 4 and boring 6). We estimate that the addition of the new fill, slab and live loads on the slab on the order of 500 psf may lead to compression of the topsoil

found at B-4 and B-6 to amounts between 1 in. and 12 in. If settlement this magnitude cannot be tolerated, then stripping of the existing topsoil s recommended. On the other hand, if these movements can be tolerated, we ecommend that a proofrolling test be carried out over the existing fill by leans of a heavy vibratory roller such as the Raygo model 400 or equivalent. lithin the areas where subsidence under these vibratory effects is pronounced local correction, which may include replacement of materials, will be required. This operation should be performed in the presence of an experienced soil engineer. Once the surface compaction is completed, fill may be placed to establish the final grade. The fill that is required to establish final grade should be placed in lifts not to exceed 12 in. in loose thickness if granular, or 9 in. in loose thickness if clayey, and should be compacted to a minimum of 95% of the maximum density in accordance with ASTM D 1557 or to a minimum of 75% relative density in accordance with ASTM D 2049 for clay and granular fills, respectively. The slab should be poured independently of the foundation walls, and we recommend that the slab panels be keyed at the joints in order to provide for shear transfer along those joints and thus to assure a continuity of surfacing between the panels should some settlement occur.

If in some of the areas actual lowering of the existing grade would be required in order to establish final grade we recommend that underlying topsoil be removed. We recommend that all the slabs have a 4 in. minimum layer of clean granular material underneath to serve as a barrier for capillary rise in the soil and to minimize dampness.

Fill that may be required to establish the subgrade level along access roads should be placed and compacted in accordance with the specifications previously discussed in connection with fill to establish the subgrade level for the slab.

GENERAL QUALIFICATIONS

This report has been prepared in order to aid in the evaluation of this property and to assist the architect and/or engineer in the design of this project. The scope is limited to the specific project and location described herein and our description of the project represents our understanding of the significant aspects relevant to soil and foundation characteristics. In the event that any changes in the design and location of the building(s) as outlined in this report are planned, we should be informed so the changes can be reviewed and the conclusions of this report modified or approved in writing by the soil and foundation engineer.

It is recommended that all construction operations dealing with earthwork and foundations be inspected by an experienced soil engineer to assure that the design requirements are fulfilled in the actual construction. If you wish, we would welcome the opportunity to provide these inspection services for you during construction. In addition, we would welcome the opportunity to review the plans and specifications when they have been prepared so that we may have the opportunity of commenting on the effect of soil conditions on the design and specifications.

The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the location diagram and from any other information discussed in this report. This report does not reflect any variations which may occur between these borings. In the performance of subsurface investigations, specific information is obtained at specific locations at specific times. However, it is a well-known fact that variations in soil and rock conditions exist on most sites between boring locations and also such situations as groundwater levels vary from time to time. The nature and extent of variations may not become evident until the course of construction. If variations then appear evident, it will be necessary for a re-evaluation of the recommendations of this report after performing on-site observations during the construction period and noting the characteristics of any variations.

Because of the possibility of these unanticipated subsurface conditions occuring, we recommend that a "changed condition" clause be provided in the contract
both with the general contractor and with contracts with sub-contractors involved in foundation and earthwork construction. It is felt that the inclusion
of this clause will permit contractors to give lower prices because they will
not need to provide as much in contingencies as they normally would if equitable
adjustment of changed conditions will minimize conflicts and litigation with
the attendant delays and costs. Furthermore, by the immediate recognition and

adjustment in contract price at the time the changed conditions are encountered, the immense problem of trying to recreate facts when litigation develops later is eliminated. A mediation/arbitration procedure is recommended in the event the owner, contractor and professionals do not agree on the changed conditions at the moment they are disclosed. If you wish, we would be pleased to furnish additional information pertaining to this procedure. A suggested wording for a changed condition clause is given in the appendix.

APPENDIX

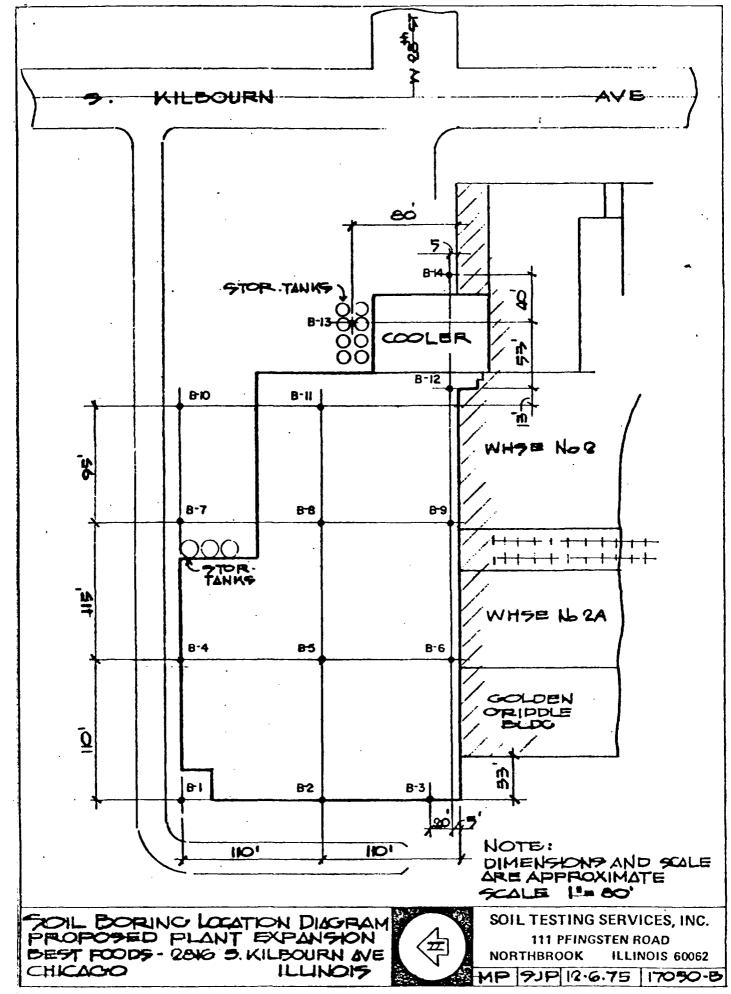
- 1. Standard Clause for Unanticipated Subsurface Conditions
- 2. Location Diagram
- 3. General Notes
- 4. Procedures Regarding Field Logs, Laboratory Data Sheets and Samples
- 5. Boring Logs
- 6. Rock Quality Designation
- 7. ASTM Specifications
 - D 1586-67
 - D-1587-67
 - D 2113-70
- 8. Unified Soil Classification System
- Soil Characteristics Pertinent to Roads and Airfields
- 10. Soil Profiles (Back Pocket)

Standard Clause for Unanticipated Subsurface Conditions

"The owner has had a subsurface investigation performed by a foundation consultant, the results of which are contained in the consultant's report. The consultant's report presents his conclusions on the subsurface conditions based on his interpretation of the data obtained in the investigation. The contractor adknowledges that he has reviewed the consultant's report and any addenda thereto, and that his bid for earthwork operations is based on the subsurface conditions, as described in that report. It is recognized that a subsurface investigation may not disclose all conditions as they actually exist and further, conditions may change, particularly groundwater conditions, between the time of a subsurface investigation and the time of earthwork operations. In recognition of these facts, this clause is entered in the contract to provide a means of equitable additional compensation for the contractor if adverse unanticipated conditions are encountered and to provide a means of rebate to the owner if the conditions are more favorable than anticipated.

At any time during earthwork, paving and foundation construction operations that the contractor encounters conditions that are different than those anticipated by the foundation consultant's report, he shall immediately (within 24 hours) bring this fact to the owner's attention. If the owner's representative on the construction site observes subsurface conditions which are different than those anticipated by the foundation consultant's report, he shall immediately (within 24 hours) bring this fact to the contractor's attention. Once a fact of unanticipated conditions has been brought to the attention of either the owner or the contractor, and the consultant has concurred, immediate negotiations will be undertaken between the owner and the contractor to arrive at a change in contract price for additional work or reduction in work because of the unanticipated conditions. The contractor agrees that the following unit prices would apply for additional or reduced work under the contract. For changed conditions for which unit prices are not provided, the additional work shall be paid for on a time and material basis."

Another example of a changed conditions clause can be found in paper No. 4035 by Robert F. Borg published in ASCE Construction Division Journal, No. CO2, September 1964, page 37.



GENERAL NOTES

1950 Chicago Building Code Soil Classifications are Used Except Where Noted

DRILLING & SAMPLING SYMBOLS

SS : Split-Spoon - 1 1/2" I.D., 2" O.D., except where noted

ST : Shelby Tube - 2" O.D., except where noted

PA: Power Auger Sample

DB : Diamond Bit - NX: BX: AX:

CB : Carboloy Bit - NX: BX: AX:

OS: Osterberg Sampler - 3" Shelby Tube

HS: Housel Sampler

WS: Wash Sample

FT : Fish Tail

RB : Rock Bit

WO: Wash Out

Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches

on a 2 inch OD split spoon, except where noted.

WATER LEVEL MEASUREMENT SYMBOLS

WL: Water Level

WCI: Wet Cave In

DCI : Dry Cave In

WS: While Sampling

WD: While Drilling

BCR: Before Casing Removal

ACR: After Casing Removal

AB : After Boring

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable ground water levels. In impervious soils, the accurate determination of ground water elevations is not possible in even several days observation, and additional evidence on ground water elevations must be sought.

CLASSIFICATION

COHESIONLESS SOILS

"Trace"	:	1% to 10%	
"Trace to some"	:	10% to 20%	
"Some"	:	20% to 35%	
"And"	:	35% to 50%	
Loose	:	O to 9 Blows	١
Medium Dense	:		or
Dense	:	30 to 59 Blows	l equivalent
Very Dense	:	≥ 60 Blows) ' , ' ' ' ' ' ' ' ' ' ' ' ' '

COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, then clay becomes the principle noun with the other major soil constituent as modifier; i.e., silty clay. Other minor soil constituents may be added according to classification breakdown for cohesionless soils; i.e., silty clay, trace to some sand, trace gravel.

Soft	:	0.00 - 0.59 tons/ft ²
Stiff	:	0.60 - 0.99 tons/ft ²
Tough	:	1.00 — 1.99 tons/ft ²
Very tough	:	2.00 - 3.99 tons/ft2
Hard	:	≥ 4.00 tons/ft ²

GENERAL NOTES

SOIL TESTING SERVICES, INC.

111 PFINGSTEN ROAD

NORTHBROOK ILLINOIS

STS

PROCEDURES REGARDING FIELD LOGS,

LABORATORY DATA SHEETS AND SAMPLES

In the process of obtaining and testing samples and preparing this report, procedures are followed that represent reasonable and accepted practice in the field of geotechnical engineering.

Specifically, field logs are prepared during performance of the drilling and sampling operations which are intended to portray essentially field occurrences, sampling locations and other information. Samples obtained in the field are frequently subjected to additional testing and reclassification in the laboratory by more experienced soil engineers, and differences between the field logs and the final logs exist. The engineer preparing the report reviews the field and laboratory logs, classifications and test data, and in his judgement in interpeting this data, may make further changes.

Samples taken in the field, some of which are later subjected to laboratory tests, are retained in our laboratory for sixty days and are then destroyed unless special disposition is requested by our client. Samples retained over a long period of time, even in sealed jars, are subject to moisture loss which changes the apparent strength of cohesive soil, generally increasing the strength from what was originally encountered in the field. Since they are then no longer representative of the moisture conditions initially encountered, an inspection of these samples should recognize this factor.

It is common practice in the soil and foundation engineering profession that field logs and laboratory data sheets not be included in engineering reports, because they do not represent the engineer's final opinions as to appropriate descriptions for conditions encountered in the exploration and testing work. On the other hand, we are aware that perhaps certain contractors and subcontractors submitting bids or proposals on work might have an interest in studying these documents before submitting a bid or proposal. For this reason, the field logs will be retained in our office for inspection by all contractors submitting a bid or proposal. We would welcome the opportunity to explain any changes that have and typically are made in the preparation of our final reports, to the contractor or subcontractors, before the firm submits its bid or proposal, and to describe how the information was obtained to the extent the contractor or subcontractor wishes. Results of laboratory tests are generally shown on the boring logs or are described in the text of the report as appropriate.

ROCK QUALITY DESIGNATION

Rock quality designation, RQD, developed by Dr. D. U. Deere, Professor of Civil Engineering and Geology, University of Illinois, is an indication of the rock quality in situ. The RQD is a modified core recovery percentage in which all the pleces of sound core over four inches long are counted as recovery. The smaller pieces are considered to be due to close shearing, jointing, faulting or weathering in the rock mass and are not counted. The RQD provides a preliminary estimate of the variations of the in situ rock mass properties from the properties of the "sound" portion of the rock core. Thus, a general estimate of the engineering behavior of the rock mass can be made. An RQD approaching 100% denotes an excellent quality rock mass with properties similar to that of the intact specimen. RQD values ranging from 0 to 50% are indicative of a poor quality rock mass having a small fraction of the strength and stiffness measured for an intact specimen.

Reference:

Deere, Hendron, Patton and Cording: "Design of Surface and Near-Surface Construction in Rock"; Failure and Breakage of Rock — 8th Symposium on Rock Mechanics, 1967, pages 246-253.

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5.0	2	ST			L			112		,		a l		
		<u> </u>	殿		Silty clay	y, trace sand δ g	ravel -			<u> </u>				
	3	ST			yerry tough	own & light gray h (CL,CL-CH)	mottled -	112					Q	i
		<u> </u>			617 toagi	11 (02,02 01)								
		RB		ł	Silty clay	y, trace sand ϵ g	ravel -							
10.0		IND.			brown & gi	ray - hard (CL)								
	4	ST						1112	}	}	}	}	d	
	<u>.</u>	۲.	41					113	İ	1	1			
		RB		l	1			1		1				\setminus
		<u> </u>	†	†	53-d114	A a la A	1	-		1				7
15.0		-	1	W.3	Sendy STI	ty clay, trace gr	avel -	}]	j				\
	5	ST		\mathcal{Z}	gray - ver	ry hard & dense (CL,CL-ML)	123		6	<u> </u>			
		<u> </u>	E		1			123	1	İ	1			}
		RB.			Limestone	rock (fleld obse	rvation)							
19.5		AS						}	}			ļ]	
					λ			*Cal	ibrat	ed P	enetr	omete	-	
					End of Bor	ring]	}	1	1	}]	1
	•					- J		}	}	1				
	}	1]	•		1	[1		1]	
	1				1				}	1				
	}			}	}			}	}	}	}	}	}]
	1	1			O' of NY	Casing Used								
	ł					easing osen				}		ł		}
	}					•			1	•]]
	1							1	1			1		
	1								1		Ì			
	}			1					ł			ļ]
	1		1		[•	[1		1	
	THE	RATI	1	1108	-	T THE APPROXIMATE BOUNDSY L	INES BETWEEK SO		. IM-817U	. THE TR	ANSITION	MAY DE	BRADUAL	<u></u>
WL 1.	51				we we	BORING STARTED	12-1-75	<u> </u>	OIL T	ESTIN	IG SEI	RVICE	S. IN	C.
<u></u>					WS OR WD	 		-			NGSTE			-•
WL 2	2' 	B-	CR		1.51 ACR	BORING COMPLETED	012-1-75		ORTH			LLINOI		
WL						RIG ROTARY FORE	MAN Pierre	APPR	OVED	BYSJ	STS I	OB NO	. 170	30-B

DWNE								LOG OF BO		NUMBE	R				
Best						· · · · · · · · · · · · · · · · · · ·			B-3						
PROJE				F.	φansion			ARCHITECT		NEER Gee &	Como				ŀ
					фанзтон			۸. ۷	. ///		<u>_</u>	 -	 		
2816			-	bou	rn Avenue,	Chicago, I	Ilino	İs			CONFIN NS/FT.	ED COM	PRE-51V	# STRE	NOTH
ELEVATION DEPTH	AMPLE NO.	AMPLE TYPE	AMPLE DISTANCE	COVERY	ĐES	CRIPTION OF	MATER	IAL	UNIT DRY WT. LBS./FT.*	LIMI	STIC	CONTI	TER ENT % — — —	LI9 LIMI 	0 alu
	8	48	SAI	RE	SURFACE E	LEVATION	98	.5	2 2	0		OLTARTIO C O	N =	LOWE/F	
		AS			Cinder fill Fine sand	l - black , satu rated, l. dense (SP	tan (€ dark \				•		•	
	1	SS								ķ	<u> </u>				
	1A				IIAII						XXX	>			
5.0	2	SI			yellow bro	wn & light	gray i					NO.	♦		
	3	SI			Silty clay	trace same	nd & g	ravel -			ŕ			χ ₀ +	
]	RE			brown & gi	ay - hard ((CL)								
10.0]				Silty clay	, trace to	some s	sand.				,			
	4					/el - gray -		•			•			0*	
	 	RI	1						 	<u> </u>		<u> </u>			
15.0	1 —	-			Í	, trace san d to very h					1				
	5	_			gray - nan	u to very i	iaiu (or, or -ony			•				έk
]	RI		\vdash	 				 -	 		┼	 		
20.0		RI		Ļ.		▶ock (field	obse	rvation)				ļ			
	}				End of Bo	ring			*Ca	ibra	red P	enetr	pmete	r	
	1														
					"A": Sili tous	ty clay, top gh (CL-CH,O	so11-	like - bro	wn i si	med	um d	ark t	b dar	k gra	у -
	1														
	1								1						
	1] .		}	1		1	
	1	1	1							1	l			1	
	7	Ì		ı											
	7								l				}		
	1_								1	<u></u>		1]	<u> </u>	
	THE 51	AATII	1CA	TION	LINES REPRESENT	THE APPROXIMATE B	OUNDRY	INKS BETWEEN SO	IL TYPE	: IN-817U	, THE YR	ANSITION	MAY DE	PRADUAL	
WL	3'				WS on WD	BORING STAF		12-2-75	s	OIL T 1			RVICE N ROA	•	C.
WL	1.5	1 B	CR		0.51 ACR	BORING COM	PLETED	12-2-75	N.	ORTH	ROOL	<u> </u>	LLINOI	S 600	62
WL						RIG Rotary	FOREM	AN Pierre	APPR	OVED	BYSJP	STS	OB NO	. 1703	30-B

Best		ds				LOG OF BO	RING 1 B-4		:R		_		
ROJEC	CT NA	AME				ARCHITECT							
				<u>د</u>	xpansion	A. G.	McKe	3 e	ompar	19			
SITE LO				-		•_	1		CONFINI NS/FT, ²		PRESSIV	E STAR	нстн
2816	Sou	th	T T	bo	ourn Avenue, Chicago, Illino	212	1 }				4		:
ELEVATION DEPTH	AMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE		DESCRIPTION OF MATER	RIAL	UNIT DRY WT. LBS./FT.*	PLA:	STIC	WAY CONTI	TER ENT % D — — —		# # # # # # # # # # # # # # # # # # #
	8	1	1-1-1	╄╼╾╃	SURFACE ELEVATION 97.		2			ETRATICI	N B	LOWS/P	TT.
===		AS		11	Cinders, sand, slag, broke stone, trace roots - dk. g	∍n lime- gray(fill)						-	'
		SS		E	HAH			O.K	×		13	•	
	1A		H		11Bit				*0	R			
5.0	2	ST			ויכיי						XO-	1	
	_2A	\Box'			Silty clay, trace sand & c brown, slightly grayish -	gravel -			6			\square	*
	3	sT			Silty clay, trace to some trace gravel - brown & gra	sand,			•		* 0	O+	
	<u> </u>	RB	+-	1	tough (CL)	1y v,	/	 			 	$\vdash \rightarrow$	_
10.0	4	ST			Sandy, silty clay, trace gray, reddish gray & brown	gravel - n bands -			1			,	*0
=		RB			hard δ dense (CL)			<u> </u>					
							1		1				
15.0]	+			Sllty clay, somewhat sandy				11	1	•	1	1
	5	ST			gravel - gray - dense & ve			1	•			'	*
	 	120	774	1		(CL,CL-ML)	1]		
	}	RB		\perp			<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
20.0 21.0	7	DB	The state of		Limestone rock (field obse	ervation)							
	1				End of Boring		*Ca	Ibra	ed P	enetr	omete	ar.	
	1			1 '							1	Ì	
	4			'	5' of NX Casing Used			1]		}
	-	1		1	5' Of NA Casing Used		1						
	}			'	"A": Clayey & silty topso							1	
	}			} '	"B": Silty clay, trace sa tough (CL,CL-CH)	and & grave	4 1 -	light	gray	E ye	#110W	brow	ή -
	1			'	"C": Silty clay, trace sa	and £ grav	,d1 -	والمل	l bre	Jun 1	lliaht	aray	.
	1				streaks - very tough	h (CL,CL-C	н)	10	7	,,,,,,	119	9.5,	
	1		ĺ			• •	T			1		.]	
	1		.}]	
	1			1									
	THE ST	RAYIF	1CAT	TION	LINES REPRESENT THE APPROXIMATE BOUNDRY	LINES BETWEEN SC	DIL TYPET	: IN-LITU	, THE TR	ANSITION	MAY DE	GRADUAI	k.
WL	41		_	_	WS OR WD BORING STARTED	12-2-75	S			NG SEI		•	c.
				_	1.51 ACR BORING COMPLETER	D 10 0 75	1 .		11 PFII BROOK	NGSTE K II	IN ROA LLINOI		162
WL]	121	-	CR	_	1.5	12-2-75		UKIH	PYOU	``	F F 1110	13 000	

Ser.

OWNE	-						LOG OF BO			R				
Best					·			B-5						
PROJE					xpans lon		ARCHITECT			·				
SITEL					Apans ron		1	. ACK	ee & C	DHEIN	ED COM	PRESSIV	E STRE	NATH
				Ьо	urn Avenue	e, Chicago, Illin	ois		TON	■/PT. ²				
ELEVATION	SAMPLE NO.	SAMPLE TYPE	ANCE	ړ		SCRIPTION OF MATER		T DRY WT. .BS./FT.?	PLAS LIMIT	**************************************	WAY CONTS	TER (NY %)	Liq Limi 	аго Т % 2
ŭ ō	¥	¥	¥	Si I	SURFACE E	ELEVATION 97.	5	UNIT	⊗	PENE	TRATIO		LOWS/F	7.
	•	PA	! 	E .		It surface on 12"		,	10	2	0 3		^	•
	1	ST			Clayey si	<pre>ilt & fine sand, black, some brow avel - tough(est)</pre>	trace n clay - (SC,CL-fi	11)			۶			
5.0	2	ST	H		Silty cla brown, sl	ay, trace sand & lightly grayish -	gravel - hard (CL)						×o	
	3	ST RB	Ü			ay, trace sand & ery tough to hard	_				-	01/4		
10.0	4	ST	100							Ì			* 0	
		RB												\
15.0	5	ST				<pre>ilty clay,trace g ery hard (CL,CL-M</pre>				-				*
	1	RB			1			1						
20.0	-	RB			Limestone	e rock (field obs	ervation)							
2013					End of Bo	oring		*Ca	librat	ed F	eneti	omet	r	
					·									
	1				·	·								
					·									
	1	1	154	I I	LINESKEPRESER	IT THE APPROXIMATE BOUNDSY	LINES BETWEEN AC	IL TYPE	. UTIE-NI :	THE TR	MEITION	MAY #8	PRADUAL	<u> </u>
WL	4.	5'			WS on WD	1	12-2-75	s	OIL TE		IG SEI	RVICE	S, IN	
WL	11	B	CR	1	.51 ACR	BORING COMPLETE	D 12-2-75	N	11 ORTHB		NGSTE (II		.D IS 6001	52
WL						RIG Rotary FORE		7						

OWNER	1_				LOG OF BO	RING B-É		ER			
Best Foo											
PROJECT N			• F	xpans ion	ARCHITEC	r-engii . McKe		`omo ai	nv		
SITE LOCAT				Apans 1011		· neke		CONFIN	TR COM		
			الم	urn Avenue, Chicago, Ill	Inole			NS/FY.			
2010 300		_		util Avenue, circago, 11	111013	1			-		
ELEVATION DEPTH AMPLE NO.	AMPLE TYPE	MPLE DISTANCE	RECOVERY	DESCRIPTION OF MA	TERIAL	T DRY WT.	>	#TIC IT % 	CONT	TER ENT % D	L
NA S	SAM	SAM	REC	SURFACE ELEVATION	97.7	N N	(9 PENI	IDARD ETRATIC	N =	LOWS/
	PA			Crushed limestone (fiel	d observation	on)					•
				Limestone screenings (u	p to fine	V	L		<u> </u>		<u> </u>
	SS			gravel size) - loose (f	111)		聚电				
1A				Silty sand followed by topsoil- black - soft t	silty & clay	(ey	MON				
5.0	ss	1			o stiff (UL,		70	_,	\		
	33			Silty clay, trace sand	& gravel -				K _		
3	ST			brown & gray - tough (C	L,CL-CH)	I			Y -	KO	
	131	E		Silty clay, trace sand	£ 08010 } =	1	}]]
10.0	RB	1.33	1	brown, slightly grayish gray - very tough (CL)					*0	ON	
4A	_			Silty clay, gray - hard	with seams		•		<u> </u>		Q#
	RB	_		& pockets of dense & ha	rd clayey	İ	,		1		\
	-			sand (CL & SC)		 	 	 			
15.0	L			Clayey silt hardpan, tr	ace to some			ĺί			1
5	ST			sand, trace gravel - gr & very hard (CL,CL-ML)	ay - dense			7			
		H		o very hard (cr,cr,nr)							
	RB						<u> </u>	<u> </u>	<u> </u>		<u> </u>
20.0 20.5	RB	學是派		Limestone rock (field o	bservation)						
				End of Boring		*Ca	hibra	ted l	enet	fome to	¢ r
			١					ļ			}
						1			}		1
				,		1	1		1		Į.
				• .		İ		}			1
		İ		10' of NX Casing Used				}	1		1
			1				1	1			
								1			1
						1	1	1	1		ł
				·							
											1
							1	1	1_		
THE ST	RATIF	ICAT	ION	LINES REPRESENT THE APPROXIMATE BOUNT	RY LINES PETWEEN 6	OIL TYPE	: IM-BITU	, THE TR	HOITIENA	MAY PE	6 R A D U
WL 3.	5'	- 4/2		WS OR WD BORING STARTE	P 12-2-75	s	OIL T	ESTIN	IG SE	RVICE	S, 11
				1.51 ACR BORING COMPLE		-1	1	11 PFI	NGSTE	N ROA	D
WL 0.5	₽4	_ ~		I CI ACK I BUKING COMPLE	168 17_7 32		ORTH			LLINOI	

OWNER Best Foo	ds			LOG OF BO	RING I B-7	NUMBE	:R				
PROJECT N				ARCHITECT							
Proposed		nt t	xpans i on	A. G.							
BITE LOCA" 2816 Sou		11bc	urn Avenue, Chicago, Illino	115	Ì		CONFIN NB/FT.	ED COM	PRESSIV	E STRE	N 6
70,000			dill Availab, 5.11 cogo, 1111		1						5
							FTIC	WA	TER	LIG LIM	IU P
ž .	TYPE	E	DESCRIPTION OF MATER	141	Ę.	>	()	/	Ž
A TION IN O.	٤	يخ اه			£t.	1	0 2	9	4	0 1	10 1
DEPTH	MPLE	MPLE			T DRY WT. BS./FT.						
DEPTH SAMPLE	<	¥ U	SURFACE ELEVATION 97	7. /	נאט	6		IDARD Tratio	N 3	LOWS/F	۲۲.
		o C	'I'A'I				0 2		0 4	0 5	Ĉ
1A			Silty & clayey topsoil, t	race brick			K			•	1
			chips - tough (OL-OH; som					0			t
2	ST		Silty clay, trace sand &	ravel -	110		,	か *0-		- 0*	
5.0			Silty clay, trace sand & yellow brown & light gray of dk. gray - very tough	pockets						50	
3	ST	172) <u> </u>	/	113		Ĭ				
4	ST		Silty clay, trace sand & brown, trace gray to brown		113		7		0		
			hard to very tough (CL)					ļ			Ļ
5	ST		Silty clay, trace to some	sand,	119		• 1		þ *0-	-O+-	
10.0	ST.		trace gravel - brownish g (10') - very tough (CL)	ray to gra	7 120			}	0_	ĺ	
$\frac{6}{6A}$	3.		Clayey silt, trace to som	s sand	126		-		5		-
		Tall to	trace gravel - gray - den				Ĭ	1		}	
	RB		hard (CL,ML-CL)					!		ļ	
15.0							1	•			
	ST				125		•	İ		·	
	3'				'~'						
		-					1/	}	ļ	}	
	RB	il Desire	1				l'	}			
20.0	ST		·		130		•				
	RB		†		1			1			
		MA	Dolomitic limestone, ligh	t orav.							T
Run			few solution cavities, so				Ì			1	
25.0	DB		fractured & jointed betwe	en 22¹ &	İ		1	[1	
	1 1		22½' & 23.1 to 23.5'		REC	= 10	0%		RQD=	57%	
27.0	┼ —┦	III				 	ļ	}	ļ	ļ	\downarrow
	1 1		End of Boring		*Ca	libra	ted	enet	romet	er	ŀ
			15' of NX Casing Used		1	<u> </u>	1		1		
			"A": Crushed stone, some	topsoll s	brok	en m	rtar	tra	Le wa	hd (4	
			A . Clusticu stolle, some	tobacii 6	1000	[" "\	1		1	[" \"	ľ
]					<u> </u>		1	<u> </u>		
THE 51	SATIFI	CATION	LINES REPRESENT THE APPROXIMATE BOUNDRY	INES BETWEEN SO	TYPES	IN-BITU	. THE TR	MOITION	MAY BE	GRADUAL	٠.
WL			WS OR WD BORING STARTED	11-26-75	s			IG SEI NGSTE		•	C.
WL 41	ВС		71 ACR BORING COMPLETE	111.26 75	ď	1	BROOK			S 600	

OWNER						LOG OF BC	RING	NUMBI	ER				
Best					·		B-8						
PROJEC						ARCHITECT							ļ
				L E	xpansion	<u> </u>	\. G.	MCKee	3 8 60	ompan	<u> </u>		
SITEL					A Chiles as 1999	• .			CONFIN NS/FT.	ED COM	PRESSIV	E STRE	НОТН
2816	Sou	th		bo	urn Avenue, Chicago, Illin	015				2 3	4		
1 1			ANCE					PLA	STIC	WA	TER	FIG	סוטי
,			Ž	1			٠	LIM	IT %	CONTI	NT %	LIMI	7 %
ELEVATION DEPTH	o.	TYPE	DIST	>	DESCRIPTION OF MATER	HAL	IIT DRY WT. LBS./FT.		<u></u>				,
🗧 🔣	M	ET		ER	•		7.6	<u> </u>	0 Z	-			
ELEVA	ויין	1	7	8			C T						.
1	SAMPLE NO.	SAMPLE	IAMPLE DIS	2	SURFACE ELEVATION 96	.5	N S	(∽	DARD	N 18	LOWS/F	т.
$\square \times$	-	PA	8		3" asphalt on 7" of crush		1	 	0 2	0 3	0 4	0 3	
			-	Н	base	ed stone	 						
			71	11.23	Silty clay w/ few pieces	of coal &	1						
	1	ST			Silty clay w/ few pieces some ashes, gray, med.dk.g	ray & blac	k-91		* o-	√ 0*			
				Н	tough (fill)		 			<u> </u>			
5.0	2 2A	51			Silty clay, trace sand & yellow brown & light gray	gravel - - tough	104	 	0	POX			
		<u> </u>			(CL,CL-CH)		Å			×	y/o/	•	
	3	ST	1		Silty clay, trace sand &	gravel -	Ì				b	k	
			EE		brown & gray to brown, so			}					
		RB	_		grayish - very tough (CL)								
10.0					Silty clay, trace sand &	gravel	1						
	4		6.3		seams of sand - gray, tra					co*			
		31	3		very tough (CL)	CC DIONII			!				
	ł	RB	1		(01)		į .						
		L K B	├		Clause alla landan		 	 -	- <i> </i> -			~	
15.0			L		Clayey silt hardpan, trac sand, trace gravel - gray			l	/		l		\
	5	ST		첿	sand, trace graver - gray	- dense			4				77
		1,	벮		ε very hard (CL,ML-CL)				Ţ				1
	į	DD	1						11				/
		RB			Clause sile s sile - sau		 	-	 				
20.0	6	ST			Clayey silt & silt - gray &hard - (ML-CL & ML)	- dense		İ	1			*04	
21.0		L			(1,2 0,2 0 1,2)		<u> </u>				ļ		
	1	١	1		End of Boring		*Ca	libra	ted I	enet	omet	er	
	1	75	ĺ					1	1				
	1	l		ŀ					l				i i
	ł			1	·			Ì		1			
	1												
	}				10' of NX Casing Used	•	1		1]			
	}		1								j	}	
	}	İ	ł	1	·		İ		l				
	}										Ì	l	
	}			ļ						[
	1			1			1						1 1
	1						-	}					
	7 HE 91	BATIF	ICAT	LION	LINES REPRESENT THE APPROXIMATE BOUNDRY :	LINES DETWEEN S) L TYPE :	: 14-5170	. THE TR	NEITION	MAY DE	BRADUAL	
WL	-		-		WS OR WD BORING STARTED	12-2-75	s	OIL T	ESTIN	IG SE	RVICE	S, INC	E. 1
-			~ ==		ACR BORING COMPLETE		1	1	II PFI	NGSTE	N ROA	D	j
WL.		114	CR	- -				ORTH				S 600	
WL					RIG Rotary FORE	MAN Plerre	APPR	OVED	BYSJ	STS	OB NO	1703	0-B

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<u> </u>						100 == ==							
OWNER Best Fo	od=					LOG OF BO	RING I		rt .				}
PROJECT N		:				ARCHITECT						 	
-			t E	xpansion				e & Co	ompar	ıγ			1
SITE LOCA	TION	1				·		O- UNC		D COMI	PESSIV	E STREE	16ТН
2816 So	uth	Κĭ) bo	urn Avenue	, Chicago, Illin	ols		TON	B/FT. ² 2	3	4	5	1
710N	SAMPLE TYPE	DISTANCE			SCRIPTION OF MATER		UNIT DRY WT. LBS./FT.*	PLAS LIMIT	%	CONTE	TER (NY %))		UID 7 %
ELEVA DEPTH NMPLE	Ä	SAMPLE	RECOVERY	·			18./						
WP CE	\$	X	ပ္ပ				F.5	8	STAN:	DARÐ TRATICI		LOWS/F1	_
	5	S S	RE	SURFACE E			5	10	2			•	· 1
	PA			3" asphal stone bas	lt surface on 12" se	crushed						-	
1	ST			Silty cla yellow but very toug	ay, trace sand & rown & light gray gh (CL,CL-CH)	gravel - mottled -	109		q				
5.0 2	ST	To a second		Silty cla brown & g	ay, trace sand & gray - very tough	to hard			/	'	*0		*
3	ST	¥		Sandy of	ilty clay; silt s	(CL)			7				Z e
	RB			gray - ve	ery hard (CL,CL-M	L)	 						
10.0				Sandy, c	layey silt hardpa	n. trace							
4	ST				gray - very hard				,				≯ 9
	RB					•			1				
15.0	+-	123			ay, trace to some avel - gray - ver								
5	ST					(CL)	1		1				*0
	RB								<u>i</u>				
20.0 6	ST	11.00		Clayey s gravel - dense & l	llt & fine sand, moist - slightly hard (ML-CL)	trace cohesive-		,				*	,
				End of Bo			*Ca	libra	ted (enet	romet	er	
				10' of N	X Casing Used								
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THE	TRATI	'ICA'	T10N	LINES REPRESENT	THE APPROXIMATE SOUNDRY L	IMES BETWEEN SO	IL TYPES	: IN-61TU,	THE TRA	HSITION	MAY DE C	RADUAL	
WL				WS on WD	BORING STARTED	12-3-75	S	OIL TE				•	·
WL 61	P	CR		61 ACR	BORING COMPLETED	12-3-75	N	II ORTHB			N ROA LINOI		, l
WL					RIGROTAN, FOREN			OVEDE				-	

OWNER								LOG OF BO	BING:	41145					
OWNER Best F	004	ds.						LUG OF BO	RING ! B-1		- M				
PROJECT					····	 		ARCHITECT		<u> </u>					
			an'	• F	xpans lon		A. G.			*omo				- 1	
SITE LOC					xp01131011			7. 9.		-O- un			PRESSIV	K STRE	HTON
			ΚI	lbo	urn Avenue	, Chlcago,	, 1111no	ols			NS/FT.		4		
ELEVATION DEPTH		SAMPLE TYPE	SAMPLE DISTANCE	ECOVERY	DES	CRIPTION OF	MATER	IAL	IT DRY WT. LBS./FT.ª	PLA LIM . >	STIC IT % 	CONTI	TER ENT %) — — —	LIQ LIMI 	46 Z
	- 1		SAR	REC	SURFACE E	LEVATION	96.	3	2	9	9 PENE	TRATIO	0 4	LOWS/P	7.
	F	PA			Silty cla	y, topsoil	-11ka -	- brownis							
====	-	ST	H		very dark	gray - bl	ack bar	nds - very				p×o-	₹		
7	A		l,			y, trace s	and & c	gravel -				•		_0*	
5.0 2		ST			br., yell	ow br 1 ns - hard (C	light a	ray; few			•		*	O(O+	
3	٦,	ST			Silty cla	y, trace s	and &	gravel -						Osk	
	A	<u>) </u>		H	brown & g	ray - hard	(CL)	j	 						Ox
	١,	PA	111		Sandy, si	lty clay -	gray-	hard			1				
10.0	Ť				(CL,CL-ML	.)	·	<i></i>	<u></u>	<u> </u>	1				4
	4 9	ST	面面		dense cla	lty clay & yey silt & - fairly c	fine s	and seams		•					*
		PA_			(CL & ML-			g - gray			<u>i</u> _	ļ 			
15.0					Silty cla	y, trace t	o some	sand,			/				
	5	ST	100		trace gra	vel - gray	-hard	(CL)			7		*	o-(ox	
		PA		Ш			·····	··			1				
20.0	6		逼		moderate!	<pre>lt hardpan y cohesive</pre>	- trac	e to some			'				
21.0			i		fine sand	trace gr	avel -	dense &	ļ				ļ		*
					End of Bo	ring			*Ca	llbra	ted	enet	fomet	er	
					"A": 3"	asphalt st	urface :	on 12 ¹¹ 11r	nes to	e ba	se (f	ield	obser	vatio	n).
	- [,			· · ·			`	}			
									1			1			
	1							٠							
	1				10' of NX	Casing Us	ed		1	1	1			}	
	Ì]	1	ł	1		l	
	}									1]				
FFI	1									1					
THE	974	AVIF	ICAT	ION I	LINES REPRESENT	THE APPROXIMATE	-	NES BETWEEN SO	IL TYPES	: IN-SITU	, YHE TRA	NSITION	MAY DE	RADUAL	
WL,				·•	WS on WD	BORING STA		12-2-75	Ş			IG SE		•	÷.]
WL 41		BC	R	_1	.51 ACR	BORING COM	MPLETED	12-2-75	N	ORTH			LLINO		32
WL						RIG Rotar	FOREM	AN Plerre	APPR	OVED	BYÇI	STS	OB NO	1702	0-R

								
WHER	LOG OF BO			ER				
Best Foods		B-10						
ROJECT NAME	ARCHITECT	-ENGI	NEER					
Proposed Plant Expansion	A. (G. Mc						
SITE LOCATION	_			CONFIN NS/FT.		PR E > \$11	E STRE	HOTH
2816 South Kilbourn Avenue, Chicago, 1111n	nols					4		3
DESCRIPTION OF MATE DESCRIPTION OF MATE DESCRIPTION OF MATE DESCRIPTION OF MATE DESCRIPTION OF MATE	ERIAL	PLASTIC WATER LI LIMIT % CONTENT % LIN A . 10 20 30 40 CONTENT % LIN STANDARD						
SURFACE ELEVATION 9	7.4	3	9	9 PENI	TRATIC		LOWS/F	7. D
PA Clayey silt, topsoil-like coal - black - very tough possibly fill 1 SS Possibly fill Silty clay, trace sand -				*		‡ Q≅	×	
5.D 2 ST 120 tough (CL,CL-CH)	- very			•				*
Silty clay, trace sand & brown, slightly grayish to gray - hard (CL)	gravel - to brown						*	•>-
Silty clay, trace to some gray, trace brown w/ seam dense clayey silt & sand (CL-ML) & (ML-CL)	ns of			1		*	00+	
RB Layers & seams of silty of	•							
5 ST (CL & ML-CL)	d & dense			•				*
RB					ļ	<u> </u>		<u> </u>
SIlty clay, trace to some trace gravel - gray - har	e sand, rd (CL)			•		*	0-0+	
End of Boring		*Ca	libra	ted P	enetr	ome te	r.	
"A": Clay fill with some	e cinders, (race	bric	chi	ps (f	ield	obsei	vati
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDS.	Y LINES BETWEEN SC	OIL TYPES	: IN-SITU	, THE TR	HOITIGH	MAY DE	GRADUAL	
WL 31 WS OR WD BORING STARTED WL 41 BCR 1.51 ACR BORING COMPLETE		S			IG SEI		-	C,
	 		ORTH		~		S 600	
WL RIG ROTATY FORE	EMAN Diorr	APPR	OVED	BY _{C ID}	STS J	ов но	ובחדו)_b

QWNER Best		ds					LOG OF BORING NUMBER B-12								
PROJEC								ARCHITECT							
Propo			an t	E	ч крап	sion		A. G.			ompar	19			
SITE L								·		O- UN	CONFIN	ED COM	PRESSIV	E STRE	NGTH
2816	Sou	th I	KI 1	boi	urn	Avenue	, Chicago, Illino	ol s		101	NB/FT, ⁸	: 2)	4) 5	, !
VATION TH	DESCRIPTION OF MAT OUT THE CONTROL OUT THE CONTROL OF MAT OUT THE CONTROL OF MAT OUT THE CONTROL OUT THE CONTROL OF MAT OUT THE CONTROL OF MAT OUT THE CONTROL OU					CRIPTION OF MATER	IAL	UNIT DRY WT. LBS./FT.º	PLASTIC WATER LIQUID LIMIT % CONTENT % LIMIT % 10 20 30 40 30						
0 6.1	BAMP	SAMP	SAMP	RECO	SUR	RFACE E	LEVATION 95	UNIT	STANDARD PENETRATION BLOWS/FT. 10 20 30 40 50						
		PA			7" (fi	concre	te on 9" crushed servation)		-		0 2				
	1	ST			Sil	ty cla	y, trace sand & cown & it. gray months it. gray months it.	gravel - ottled -				•	Q*		
5.0	2	ST	Ma:		tra	sce gra	y, trace to some vel - gray, trace	sand, brown -			•		40	-0+	
	3	ST	Ш		SII	lty cla	h to hard (CL) y, trace to some vel, gray; brown	sand,			P		₩0	O#	
10.0	<u> </u>	RB	-		sea	ams - h	ard (CL)		/		-				
10.0		-	明	H					1		l i				*6
	4	ST	韶		Sar	ndy, si	lty clay, trace o	gravel -			1				* *
		RB			gra	•	tween hard & very	-			i				
15.0	<u> </u>	ST	***	4					·		١			*0±	
		RB			63		la e fina conduc	.	 		<u>د</u>	 	 -	 	*
				P 9-1	gra	avel, s	<pre>lt & fine sand, i lightly to modera - moist - gray -</pre>	ately		,					
20 0 21.0	1	ST			۱ ع	very ha	rd (ML-CL)	JEH56			•				*
					End	d of Bo	ring		νCа	llbra	ted f	enet	ome t	r	
					5'	of NX	Casing Used								
						•									
	THE .	I ATIF	100	1104	LINES	# E PM E P E M T	THE APPROXIMATE BOUNDRY L	.IMES BETWEEN SO	ILTYPES	1	THE TR	ANSITION	1 MAY DE :	PRADUAL	
WL						S on WD	BORING STARTED	12-3-75	S	OIL T	ESTIN	IG SE	RVICE	5, INC	c. 1
	71						BORING COMPLETED		1			NGSTE			
WL	71		CR		51	ACR				ORTH				IS 600	
WL						1	RIG ROTATY FOREN	MANPlarra	[APPR	OVED	BYCI	STS	OB NO	1702	7-P

GWNER		ods.				LOG OF BO			R			· · · · · · · · ·			
PROJEC						ARCHITECT	B-13								
1			nn t	F	xpansion	1									
SITE L					wans ron	A. B.		<u>6_6_6</u> ()− unc	onsine Ompan	Y COMP	RESSIV	E STREE	IGTH		
1			KI)	bo	urn Avenue, Chicago, Illino	is			s/FT. ² 2		4	5			
ELEVATION DEPTH	Z F O E			DESCRIPTION OF MATER	IAL	UNIT DRY WT. LBS./FT.	PLASTIC WATER EIQUID LIMIT % CONTENT % LIMIT %								
	SAM	m m K SORPACE ELEVATION					CNI	STANDARD PENETRATION BLOWS/FT, 10 20 30 40 50							
		RB		ı	TAN TAN TAN TAN TAN TAN TAN TAN TAN TAN			-	1	1	- 1	اء]		
	1	ST			Silty clay, trace sand & g brown & gray to med. dark hard (CL,CL-CH)		116		•				٥		
5.0	2	ST			Silty clay, trace sand & c yellow brown & light gray very tough to hard (CL,CL-	mottled -	110				•				
	3	ST			Silty clay, traceto some s gravel - brown, slightly g	and, tr.	118		•						
10.0	4	ST			very hard (CL)		123		•				0		
	5	ST			Silty clay, trace to some trace gravel - gray - very (CL,CL-HL)	sand, hard	123						ý		
15.0		RB			(or, or mr)								Λ		
	6	ST					126		•				8		
20.0	7	RB ST					121						V		
	7A	RB			Silt, trace clay - moist - dense to very dense (ML)	gray -	116		•				0*		
25.0	8	ST			. t.		128						C		
30.0	7	DB	To State Sta		Dolomitic limestone, light slightly porous, dense but what fractured and jointed arly from 21' to 22.8'	some-	1 .	÷ 90%		RQD	=76%				
	1				End of Boring 25' of 4" Ca	sing on 12" c	*Ca ushe	ibra	ed P	enetr e bas	omete e(fle	r ld ol	serva		
-	ST	MATIF	CAT	10 14	LIGHT OF THE APPROXIMATE BOUNDRY L	IVAS DETWEN BO		OIL TE	STIN	CCE	VICE	S IN			
WL	101		R		WS OR WD BORING STARTED 71 ACR BORING COMPLETED	11-25-75	1	11	I PFIN	IGSTE	N ROA	ם ם	1		
WL								ORTHB				S 6006			
					RIG ROTARY FOREM	"Plerre	1 CL		J J P	3.37		1/0	ם־טכ		

PVINER					LOG OF BO			R				- 1
Best Foo						B-14						
PROJECT N		. r.			ARCHITECT	r-ENGII . McK		Ca ma a				1
Proposed		ξ Ε.	kpans ion		A. 6	. ncn			y			
2816 Sou		160	urn Avenue	, Chicago, Illi	inois		UN 70	CONFIN MS/FT, ⁸	ED COM	PRESSIV	K STRE!	НОТН
ELEVATION DEPTH AMPLE NO.	ON DESCRIPTION OF MAT ON DESCRIPTION OF MAT ON DESCRIPTION OF MAT ON DESCRIPTION OF MAT ON DESCRIPTION OF MAT					IIT DRY WT. LBS./FT.ª	LIMIT	11001B 11477 % -\Delta = 1				
	SAN NAS	REC	SURFACE E	LEVATION S	S	STANDARD PENETRATION BLOWS/FT 10 20 30 40 80						
	PA	11	''A''			1						
1	87		yellow br	y, trace sand € own & l‡ght gra ph (CL,CL-CH)					*o	- γ ×	*	
5.0 2	ST			y, trace sand & gray - hard (Cl				9			0*	
3	ST		•	y, trace to son				*		* c	10+	
10.0	RB			ivel - gray - ve (CL,CL-ML)	ery tough			j				
4	ST		to hard ((or, or he)				<i>†</i>		γo	(01	
	RB	1						'			\longrightarrow	
15.0	ST		gravel -	<pre>ilt & fine sand, slightly to mod - moist - dense</pre>	derat ė ly			/				*
	RB		hard (ML-									
20.0 6	ST		Silt, tra dense (Mi	ace clay - mois L)	t - gray -			•				*
			End of Bo	oring		*Ca	ibra	ed P	netr	omete	r	
			''A'': 5 ''	asphalt surface	e on 7" of c	rushe	d 1ta	esto	ne ba	se .		
			5! of NX	Casing Used								
目										}		
FII -	1 1		,	•				1	1			
THE P	TRATIFICA	TION	LINES REPRESENT	THE APPROXIMATE BOUNDS	RY LINES BETWEEN SC	IL TYPES	: IN-81TU	. THE TH	MOITION	MAY DE (RADUAL	
WL			WS on WD	BORING STARTED		s				RVICE	-	;.
WL 71	BCR		71 ACR	BORING COMPLET	12-3-75	N	ORTHI			LLINOI		52
WL RIG ROTATY FOREMANPIETTE APPROVED BYSJP STS JOB NO. 17030-B										-		_